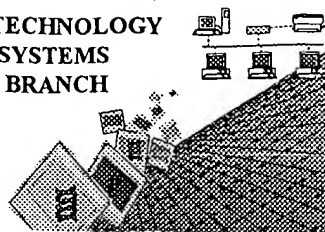


BIOTECHNOLOGY  
SYSTEMS  
BRANCH



2590  
0321

**RAW SEQUENCE LISTING**  
**ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/862,855D  
Source: OIPF  
Date Processed by STIC: 3/24/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER**  
**VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

**<http://www.uspto.gov/web/offices/pac/checker>**

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

# Raw Sequence Listing Error Summary

## ERROR DETECTED

## SUGGESTED CORRECTION

SERIAL NUMBER: 09/862,855D

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics  
    Wrapped Aminos      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2      Invalid Line Length      The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3      Misaligned Amino  
    Numbering      The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4      Non-ASCII      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5      Variable Length      Sequence(s)      contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6      PatentIn 2.0  
    "bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s)     . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7      Skipped Sequences  
    (OLD RULES)      Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence:  
    (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
    (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
    This sequence is intentionally skipped  
  
    Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8      Skipped Sequences  
    (NEW RULES)      Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence.  
    <210> sequence id number  
    <400> sequence id number  
    000
- 9      Use of n's or Xaa's  
    (NEW RULES)      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
    Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
    In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.
- 10      Invalid <213>  
    Response      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11      Use of <220>      Sequence(s)      missing the <220> "Feature" and associated numeric identifiers and responses.  
    Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
    (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12      PatentIn 2.0  
    "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13      Misuse of n      n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.



OIPE

## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/09/862,855D

TIME: 16:40:35

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\03242003\I862855D.raw

3 <110> APPLICANT: Cai, Hong  
 4 Keller, Richard  
 5 Werner, James  
 6 Goodwin, Peter  
 8 <120> TITLE OF INVENTION: RAPID HAPLOTYPING BY (By WHAT?)  
 10 <130> FILE REFERENCE: S-94,652  
 12 <140> CURRENT APPLICATION NUMBER: US 09/862,855D  
 C--> 13 <141> CURRENT FILING DATE: 2003-03-18  
 15 <160> NUMBER OF SEQ ID NOS: 21  
 17 <170> SOFTWARE: PatentIn version 3.1  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 20  
 21 <212> TYPE: DNA  
 22 <213> ORGANISM: DNA  
 24 <220> FEATURE:  
 25 <221> NAME/KEY: misc\_feature  
 26 <223> OTHER INFORMATION: M13mp18  
 29 <400> SEQUENCE: 1  
 30 gctcgaattc gtaatcatcg  
 33 <210> SEQ ID NO: 2  
 34 <211> LENGTH: 18  
 35 <212> TYPE: DNA  
 36 <213> ORGANISM: DNA  
 38 <220> FEATURE:  
 39 <221> NAME/KEY: misc\_feature  
 40 <223> OTHER INFORMATION: M13mp18  
 43 <400> SEQUENCE: 2  
 44 cagtgccaaag cttcgatg  
 47 <210> SEQ ID NO: 3  
 48 <211> LENGTH: 97  
 49 <212> TYPE: DNA  
 50 <213> ORGANISM: DNA  
 52 <220> FEATURE:  
 53 <221> NAME/KEY: misc\_feature  
 54 <223> OTHER INFORMATION: MLL  
 57 <400> SEQUENCE: 3  
 58 gaagttccca aaaccactcc tagtgagccc aagaaaaagc agcctccacc accaaaacaa  
 60 tatgatacat cttcaaaaac tcaactcaaat tctcagc  
 63 <210> SEQ ID NO: 4  
 64 <211> LENGTH: 27  
 65 <212> TYPE: DNA  
 66 <213> ORGANISM: DNA  
 68 <220> FEATURE:

Does Not Comply  
 Corrected Diskette Needed

globally  
 Invalid response - see item 10  
 on Enr Summary Sheet

20

18

60

97

## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/09/862,855D

TIME: 16:40:35

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\03242003\I862855D.raw

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69 <221> NAME/KEY: misc_feature
70 <223> OTHER INFORMATION: MLL 3968L20
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74 aaaaatttct tgggcttcac tagggag 27
77 <210> SEQ ID NO: 5
78 <211> LENGTH: 29
79 <212> TYPE: DNA
80 <213> ORGANISM: DNA
82 <220> FEATURE:
83 <221> NAME/KEY: misc_feature
84 <223> OTHER INFORMATION: AF4 4025L24
87 <400> SEQUENCE: 5
88 aaaaaaattt gagtgagttt ttgaagatg 29
91 <210> SEQ ID NO: 6
92 <211> LENGTH: 12
93 <212> TYPE: DNA
94 <213> ORGANISM: DNA
96 <220> FEATURE:
97 <221> NAME/KEY: misc_feature
98 <223> OTHER INFORMATION: MLLCy5P
101 <400> SEQUENCE: 6
102 tttcttgggc tc 12
105 <210> SEQ ID NO: 7
106 <211> LENGTH: 12
107 <212> TYPE: DNA
108 <213> ORGANISM: DNA
110 <220> FEATURE:
111 <221> NAME/KEY: misc_feature
112 <223> OTHER INFORMATION: MLLCy5L
115 <220> FEATURE:
116 <221> NAME/KEY: misc_feature
117 <223> OTHER INFORMATION: AF4FAMP
120 <400> SEQUENCE: 7
121 tttgagtgag tt 12
124 <210> SEQ ID NO: 8
125 <211> LENGTH: 12
126 <212> TYPE: DNA
127 <213> ORGANISM: DNA
129 <220> FEATURE:
130 <221> NAME/KEY: misc_feature
131 <223> OTHER INFORMATION: MLLCy5L
134 <400> SEQUENCE: 8
135 tttcttgggc tc 12
138 <210> SEQ ID NO: 9
139 <211> LENGTH: 12
140 <212> TYPE: DNA
141 <213> ORGANISM: DNA
143 <220> FEATURE:
144 <221> NAME/KEY: misc_feature

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## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/09/862,855D

TIME: 16:40:35

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\03242003\I862855D.raw

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145 <223> OTHER INFORMATION: AF4RGXL
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149 tttagagtggag tt                                     12
152 <210> SEQ ID NO: 10
153 <211> LENGTH: 32
154 <212> TYPE: DNA
155 <213> ORGANISM: DNA
157 <220> FEATURE:
158 <221> NAME/KEY: misc_feature
159 <223> OTHER INFORMATION: A*02011/A/TT/GT
162 <400> SEQUENCE: 10
163 tggcagctca gaccaccaag cacaagtggg ag                 32
166 <210> SEQ ID NO: 11
167 <211> LENGTH: 76
168 <212> TYPE: DNA
169 <213> ORGANISM: DNA
171 <220> FEATURE:
172 <221> NAME/KEY: misc_feature
173 <223> OTHER INFORMATION: A*02011/A/TT/GT
176 <400> SEQUENCE: 11
177 gcggcccatg tggcggagca gttgagagcc tacctggagg gcacgtgcgt ggagtggctc   60
179 cgcagatacc tggaga                                     76
182 <210> SEQ ID NO: 12
183 <211> LENGTH: 32
184 <212> TYPE: DNA
185 <213> ORGANISM: DNA
187 <220> FEATURE:
188 <221> NAME/KEY: misc_feature
189 <223> OTHER INFORMATION: A*0212/A/CA/GT
192 <400> SEQUENCE: 12
193 tggcagctca gaccaccaag cacaagtggg ag                 32
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198 <212> TYPE: DNA
199 <213> ORGANISM: DNA
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202 <221> NAME/KEY: misc_feature
203 <223> OTHER INFORMATION: A*0212/A/CA/GT
206 <400> SEQUENCE: 13
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209 cgcagatacc tggaga                                     76
212 <210> SEQ ID NO: 14
213 <211> LENGTH: 32
214 <212> TYPE: DNA
215 <213> ORGANISM: DNA
217 <220> FEATURE:
218 <221> NAME/KEY: misc_feature
219 <223> OTHER INFORMATION: A*0236/A/TT/CG
222 <400> SEQUENCE: 14

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## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/09/862,855D

TIME: 16:40:35

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\03242003\I862855D.raw

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223 tggcagctca gaccacccaa gacaagtggg ag 32
226 <210> SEQ ID NO: 15
227 <211> LENGTH: 76
228 <212> TYPE: DNA
229 <213> ORGANISM: DNA
231 <220> FEATURE:
232 <221> NAME/KEY: misc_feature
233 <223> OTHER INFORMATION: A*0236/A/TT/CG
236 <400> SEQUENCE: 15
237 gcggcccatg tggcggagca gttgagagcc tacctggagg gcacgtgcgt ggacgggctc 60
239 cgcagatacc tggaga 76
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243 <211> LENGTH: 32
244 <212> TYPE: DNA
245 <213> ORGANISM: DNA
247 <220> FEATURE:
248 <221> NAME/KEY: misc_feature
249 <223> OTHER INFORMATION: A*2402101/G/CA/CG
252 <400> SEQUENCE: 16
253 tggcagctca gaccacccaa ggcaagtggg ag 32
256 <210> SEQ ID NO: 17
257 <211> LENGTH: 76
258 <212> TYPE: DNA
259 <213> ORGANISM: DNA
261 <220> FEATURE:
262 <221> NAME/KEY: misc_feature
263 <223> OTHER INFORMATION: A*2402101/G/CA/CG
266 <400> SEQUENCE: 17
267 gcggcccatg tggcggagca gcagagagcc tacctggagg gcacgtgcgt ggacgggctc 60
269 cgcagatacc tggaga 76
272 <210> SEQ ID NO: 18
273 <211> LENGTH: 32
274 <212> TYPE: DNA
275 <213> ORGANISM: DNA
277 <220> FEATURE:
278 <221> NAME/KEY: misc_feature
279 <223> OTHER INFORMATION: A*24031/G/CA/GT
282 <400> SEQUENCE: 18
283 tggcagctca gaccacccaa ggcaagtggg ag 32
286 <210> SEQ ID NO: 19
287 <211> LENGTH: 76
288 <212> TYPE: DNA
289 <213> ORGANISM: DNA
291 <220> FEATURE:
292 <221> NAME/KEY: misc_feature
293 <223> OTHER INFORMATION: A*24031/G/CA/GT
296 <400> SEQUENCE: 19
297 gcggcccatg tggcggagca gcagagagcc tacctggagg gcacgtgcgt ggagtggctc 60
299 cgcagatacc tggaga 76

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## RAW SEQUENCE LISTING

DATE: 03/24/2003

PATENT APPLICATION: US/09/862,855D

TIME: 16:40:35

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\03242003\I862855D.raw

302 <210> SEQ ID NO: 20  
303 <211> LENGTH: 32  
304 <212> TYPE: DNA  
305 <213> ORGANISM: DNA  
307 <220> FEATURE:  
308 <221> NAME/KEY: misc\_feature  
309 <223> OTHER INFORMATION: A\*2413/G/TT/GT  
312 <400> SEQUENCE: 20  
313 tggcagctca gaccacccaa ggcaagtggg ag 32  
316 <210> SEQ ID NO: 21  
317 <211> LENGTH: 76  
318 <212> TYPE: DNA  
319 <213> ORGANISM: DNA  
321 <220> FEATURE:  
322 <221> NAME/KEY: misc\_feature  
323 <223> OTHER INFORMATION: A\*2413/G/TT/GT  
326 <400> SEQUENCE: 21  
327 gcggcccatg tggcggagca gttgagagcc tacctggagg gcacgtgcgt ggacgggctc 60  
329 cgcagatacc tggaga 76

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/862,855D

DATE: 03/24/2003

TIME: 16:40:36

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\03242003\I862855D.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date